#### PATENT COOPERATION TREATY

## **PCT**

# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

| Applicant's or agent's file reference 630666.00010  | FOR FURTHER ACTION   | See item 4 below   |  |  |
|---|--|--|--|--|
| International application No. PCT/US2004/027926   | International filing date (day/month/year) 27 August 2004 (27.08.2004) | Priority date (day/month/year) 29 August 2003 (29.08.2003) |  |  |
| International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237 |  |  |  |  |
| Applicant MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH  |  |  |  |  |

| 1.  | This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 his.1(a).  |   |  |  |  |
|---|--|---|--|--|--|
| 2.  | This REPORT consists of a total of 4 sheets, including this cover sheet.   |   |  |  |  |
|   | In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.  |   |  |  |  |
| 3.  | . This report contains indications relating to the following items:  |   |  |  |  |
|   | Box No. I  | No. I Basis of the report   |  |  |  |
|   | Box No. II   | Priority  |  |  |  |
|   | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |  |  |  |
|   | Box No. IV   | Lack of unity of invention  |  |  |  |
|   | Box No. V  | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |  |  |  |
|   | Box No. VI   | Certain documents cited   |  |  |  |
|   | Box No. VII  | Certain defects in the international application  |  |  |  |
|   | Box No. VIII   | Certain observations on the international application   |  |  |  |
| 4.  | 4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis.2). |   |  |  |  |
|   |  | ,,  |  |  |  |
|   |  |   | Date of issuance of this report<br>28 February 2006 (28.02.2006) |  |  |
| The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland |  | lombettes   | Authorized officer  Yolaine Cussac                               |  |  |
| Facsi   | Facsimile No. +41 22 740 14 35 Telephone No. +41 22 338 70 80  |   |  |  |  |

Form PCT/IB/373 (January 2004)

### PATENT COOPERATION TREATY

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INTERNATIONAL SEARCHING AUTHORITY

| 10:                     |
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| 411 E. WISCONSIN AVENUE   |  | WRITTEN OPINION OF THE                         |   |  |
| MILWAUKEE, WI 53202   |  | INTERNATIONAL SEARCHING AUTHORITY              |   |  |
|   |  |  |   |  |
|   |  |  | (PCT Rule 43bis.1)  |  |
|   | İΓ   | Date of mailing                                |   |  |
|   |  | (day/month/year) 10 MAY 2005                   |   |  |
| Applicant's or agent's file reference   |  | FOR FURTHER ACTION                             |   |  |
| 630666,00010  |  | See paragraph 2 below                          |   |  |
| International application No.   | International filing date (  | lay/month/year) Priority date (day/month/year) |   |  |
| PCT/US04/27926  | 27 August 2004 (27.08.2  | 004)   | 29 August 2003 (29.08.2003)   |  |
| International Patent Classification (IPC) o   | or both national classificati  | ion and IPC                                    |   |  |
| IPC(7): C08J 9/00; C08K 5/00 and US C   | 1 • 521/61 102 130 149   |  |   |  |
| Applicant   | 11. 521/01/ 102/ 100/ 100  |  |   |  |
| 1   |  | IOD A DOM                                      |   |  |
| MAYO FOUNDATION FOR MEDICAL   | L EDUCATION AND RE   | SEARCH   |   |  |
| This opinion contains indications rela  | ating to the following item  | s: ·   |   |  |
| 1. This opinion contains indications real   | army to the rone wing in-  |  |   |  |
| Box No. I Basis of the  | opinion  |  |   |  |
| Box No. II Priority   |  |  |   |  |
| Box No. III Non-establis  | Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |  |   |  |
| Box No. IV Lack of unit   | Lack of unity of invention   |  |   |  |
| Box No. V  Reasoned statement under Rule 43bis. 1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement  |  |  | to novelty, inventive step or industrial statement  |  |
| Box No. VI Certain doct   | uments cited   |  |   |  |
| Box No. VII Certain defe  | Box No. VII Certain defects in the international application   |  |   |  |
| Box No. VIII Certain obse   | ervations on the internation   | nal application                                |   |  |
| 2. FURTHER ACTION   |  |  |   |  |
| If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered. |  |  |   |  |
| IPEA a written reply together, wh<br>mailing of Form PCT/ISA/220 or be  | nere appropriate, with am<br>efore the expiration of 22  | iendments, before l                            | PEA, the applicant is invited to submit to the he expiration of 3 months from the date of fority date, whichever expires later. |  |
| For further options, see Form PCT/ISA/220.  |  |  |   |  |
| 3. For further details, see notes to Form PCT/ISA/220.  |  |  |   |  |
| Name and mailing address of the ISA/ U  | IS .   | Authorized offic                               | er / / / / /  |  |
| Mail Stop PCT, Attn: ISA/US   |  |  |   |  |
| Commissioner for Patents  |  | Irina S. Zemel                                 | WIVVON  |  |
| P.O. Box 1450   |  | Telephone No. 571-272-0577                     |   |  |
| Alexandria, Virginia 22313-1450 Telephone No. 571-272-0577  |  |  |   |  |

Facsimile No. (703) 305-3230
Form PCT/ISA/237 (cover sheet) (January 2004)

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US04/27926

| Box No. I Basis of this opinion   |  |  |  |  |
|---|--|--|--|--|
| the language in which   |  |  |  |  |
| 1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  |  |  |  |  |
| This opinion has been established on the basis of a translation from the original language into the following language which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).  |  |  |  |  |
| . With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:  |  |  |  |  |
| a. type of material   |  |  |  |  |
| a sequence listing  |  |  |  |  |
| table(s) related to the sequence listing  |  |  |  |  |
| b. format of material   |  |  |  |  |
| in written format   |  |  |  |  |
| in computer readable form   |  |  |  |  |
| c. time of filing/furnishing  |  |  |  |  |
| contained in international application as filed.  |  |  |  |  |
| filed together with the international application in computer readable form.  |  |  |  |  |
| furnished subsequently to this Authority for the purposes of search.  |  |  |  |  |
| In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished. |  |  |  |  |
| 4. Additional comments:   |  |  |  |  |
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## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No. PCT/US04/27926

Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

| _  | ирричиниј,                    |        |      | <del></del> |
|----|-------------------------------|--------|------|-------------|
| 1. | Statement                     |        |      |             |
|    | Novelty (N)                   | Claims | NONE | YES         |
|    |                               | Claims | 1-28 | NO          |
|    | Inventive step (IS)           | Claims | NONE | YES         |
|    | mitomito stop (12)            | Claims |      | NO          |
|    | Industrial applicability (IA) | Claims | 1-28 | YES         |
|    | madelia approved (may         |        | NONE | NO          |
|    |                               |        |      |             |

#### 2. Citations and explanations:

Claims 1-28 novelty under PCT Article 33(2) as being anticipated by US Patent 6,271,278 to Park et al.

Park discloses compositions for making porous scaffolds comprising biodegradable unsaturated polymer, crosslinking agents and a bidegradable porogens. Among suitable porogens, hydrogel microparticles based on crosslinked collagen derivatives, crosslinked polyethylene glycols and many other suitable microgels are expressly disclosed in column 6, lines 52 to column 7, line 5. The biodegradable polymers disclosed in the reference include methacrylates and fumarates. See column 6, lines 24-43. The disclosed compositions can further include water and various bioactive agents. The invention is useful for various application such as long term drug delivery and can be placed in human or animal body. The invention as claimed, therefore, is anticipated by the Park reference.

Claims 1-28 meet the criteria set out in PCT Article 33(4), and thus meet industrial applicability because the subject matter claimed can be made or used in industry.